

APPENDIX: VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The following amendments were presented by way of the amended claims above:

Claims 12-14, 17-20, 23-25 and 40-46 were cancelled.

1. (Thrice Amended) A method to inhibit expression of a target gene in a cell in vitro comprising introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, wherein the RNA [comprises] consists essentially of a double-stranded structure having a first ribonucleotide sequence [comprising at least 25 bases] which correspondss to a nucleotide sequence of the target gene and a second ribonucleotide sequence [comprising at least 25 bases] which [are] is complementary to the nucleotide sequence of the target gene, wherein the first and the second ribonucleotide sequences are separate complementary sequences that [stably anneal] hybridize to each other to form said double-stranded structure, and the [cell is susceptible to RNA interference] double-stranded structure inhibits expression of the target gene.

10. (Twice Amended) The method of claim 1 in which the first and the second ribonucleotide sequences comprise at least [50] 25 bases which correspond to or are complementary to the nucleotide sequence of the target gene.

15. (Amended) The method of claim [14] 1 further comprising synthesis of the two complementary strands and initiation of RNA duplex formation outside the cell.

16. (Amended) The method of claim [14] 1 further comprising synthesis of the two complementary strands and initiation of RNA duplex formation inside the cell.

22. (Thrice Amended) A method to inhibit expression of a target gene in an invertebrate organism comprising:

(d) providing an invertebrate organism containing a target cell, wherein the target cell contains the target gene and the target cell is susceptible to RNA interference, and the target gene is expressed in the target cell;

- (e) contacting said invertebrate organism with a ribonucleic acid (RNA) [with the organism], wherein the RNA [is comprised] consists essentially of a double-stranded structure [with duplexed] formed by two separate ribonucleic acid strands [of at least 25 bases in length] and those ribonucleic acid strands are each able to specifically hybridize to the target gene [over the at least 25 bases] and to each other; and
- (f) introducing the RNA into the target cell, thereby inhibiting expression of the target gene.

28. (Twice Amended) The method of claim 22 in which [the duplexed] said double-stranded ribonucleic acid [strands] structure [are] is at least [50] 25 bases in length and each of the ribonucleic acid strands is able to specifically hybridize to a deoxyribonucleic acid strand of the target gene over the at least [50] 25 bases.

32. (Twice Amended) The method of claim 22 in which the organism is contacted with the RNA by feeding the organism food containing the RNA [to the organism].

39. (Thrice Amended) A kit comprising reagents for inhibiting expression of a target gene in a cell,

wherein said kit comprises (a) means for introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, and (b) the RNA;

wherein the RNA [has] consists essentially of a double-stranded structure formed by two separate strands with a first ribonucleotide sequence [comprising at least 25 bases] which corresponds to a nucleotide sequence of the target gene and a second ribonucleotide sequence [comprising at least 25 bases] which [are] is complementary to the nucleotide sequence of the target gene, wherein the first and the second ribonucleotide sequences [stably anneal] hybridize to each other to form the double-stranded structure[, and the cell is susceptible to RNA interference].

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